August 16, 2004

Acquisition

Implementation of the DoD Management Control Program for Air Force Acquisition Category II and III Programs

(D-2004-108)

Department of Defense
Office of the Inspector General

Quality   *Integrity*   *Accountability*

1. REPORT DATE **16 AUG 2004**	2. REPORT TYPE **N/A**	3. DATES COVERED **-**	
4. TITLE AND SUBTITLE **Acquisition: Implementation of the DoD Management Control Program for Air Force Acquisition Category II and III Programs**		5a. CONTRACT NUMBER	
		5b. GRANT NUMBER	
		5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)		5d. PROJECT NUMBER	
		5e. TASK NUMBER	
		5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Dept of Defense Office of Inspector General 400 Amy Navy Drive (801) Arlington, VA 22202**		8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)	
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT **Approved for public release, distribution unlimited**			
13. SUPPLEMENTARY NOTES			
14. ABSTRACT			
15. SUBJECT TERMS			

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT **UU**	18. NUMBER OF PAGES **31**	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**			

DEPARTMENT OF DEFENSE

hotline

To report fraud, waste, mismanagement, and abuse of authority.

Send written complaints to: Defense Hotline, The Pentagon, Washington, DC 20301-1900
Phone: 800.424.9098   e-mail: hotline@dodig.osd.mil   www.dodig.osd.mil/hotline

Acronyms

APB	Acquisition Program Baseline
C4I	Command, Control, Communications, Computers, and Intelligence
MDA	Milestone Decision Authority
OMB	Office of Management and Budget
ORD	Operational Requirements Document
PESHE	Programmatic Environmental, Safety, and Health Evaluation
TEMP	Test and Evaluation Master Plan

August 16, 2004

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: Report on Implementation of the DoD Management Control Program for
Air Force Acquisition Category II and III Programs
(Report No. D-2004-108)

We are providing this report for review and comment. DoD Directive 7650.3
requires that all recommendations be resolved promptly. Because the Air Force did not
comment to the July 1, 2004, draft report, we request that the Air Force provide
comments on this final report by September 17, 2004.

Management comments should indicate concurrence or nonconcurrence with the
findings and each recommendation. Comments must describe actions taken or planned in
response to agreed-upon recommendations and provide the completion dates of the
actions. State specific reasons for any nonconcurrence and propose alternative actions, if
appropriate. If possible, please send management comments in electronic format (Adobe
Acrobat file only) to Audam@dodig.osd.mil. Copies of the management comments must
contain the actual signature of the authorizing official. We cannot accept the / Signed /
symbol in place of the actual signature. If you arrange to send classified comments
electronically, they must be sent over the SECRET Internet Protocol Router Network
(SIPRNET).

We appreciate the courtesies extended to the staff. Questions should be directed
to Mr. John E. Meling at (703) 604-9091 (DSN 664-9091) or Ms. Celia J. Harrigan at
(703) 604-9092 (DSN 664-9092). See Appendix C for the report distribution. The team
members are listed inside the back cover.

By direction of the Deputy Inspector General for Auditing:

Mary L. Ugone
Assistant Inspector General
for Acquisition Management

Implementation of the DoD Management Control Program for Air Force Acquisition Category II and III Programs

Executive Summary

Who Should Read This Report and Why? Civil service and uniformed officers who are involved in the Air Force acquisition decision making process should read this report because it provides an assessment of how the Air Force can improve its management control program for oversight of Air Force weapon system programs.

Background. This audit is the second in a series of audits to evaluate the effectiveness of the Military Departments' management control programs in timely identifying deviations in cost, schedule, and performance requirements in acquisition program baselines for Acquisition Category II and III programs to the milestone decision authority and in identifying whether program managers are reporting their status on preparing and obtaining approval of required program documentation to milestone decision authorities before milestone decision reviews.

The first report, Inspector General, DoD Report No. D-2004-47, "Implementation of the DoD Management Control Program for Army Acquisition Category II and III Programs," January 23, 2004, assessed the Army Management Control Program for oversight of Acquisition Category II and III programs. The third report, Report No. D-2004-109, "Implementation of the DoD Management Control Program for Navy Acquisition Category II and III Programs," August 17, 2004, assessed the Navy Management Control Program for oversight of Acquisition Category II and III programs.

Results. The Air Force did not effectively integrate the requirements of the DoD Management Control Program into its management assessment and reporting process for eight Acquisition Category II and III programs that had an estimated life-cycle cost of $1.9 billion. As a result, the program managers did not have documented and updated information needed to more effectively manage their programs. The program managers further contributed to this condition by not reporting program deviations and not requesting revisions to acquisition program baselines when cost, schedule, and performance breaches occurred. Program managers did not provide milestone decision authorities with timely and documented information so they could assist program managers who were experiencing cost overruns, schedule delays, and performance problems. Further, milestone decision authorities made important program decisions at milestone decision points with incomplete information on the readiness of the systems for the next phase of the acquisition process. To ensure that Air Force milestone decision

authorities make fully informed investment decisions, the Air Force needs to modify its existing reporting requirements for program managers of Acquisition Category II and III programs to report, at least quarterly, their progress toward satisfying cost, schedule, and performance requirements in acquisition program baselines and obtaining, preparing and updating, and issuing approved program documentation before and at planned milestone decision reviews. Implementation of this reporting requirement will enable Air Force milestone decision authorities to ensure that program managers are on schedule toward satisfying program requirements, submitting program deviation reports when required, and reporting deviations from acquisition program baselines as management control weaknesses. (See the Finding section for details.)

Management Comments. The Air Force did not respond to the July 1, 2004, draft report. Therefore, we request that the Air Force Acquisition Executive provide comments on this final report by September 17, 2004.

Table of Contents

Background

This audit is the second in a series of audits that will evaluate the effectiveness of the Military Departments' management control programs in timely identifying deviations in cost, schedule and performance requirements in acquisition program baselines (APB) for Acquisition Category II and III programs[1] to the milestone decision authority (MDA) and in identifying whether program managers are preparing and obtaining required program documentation before milestone decision reviews. DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003, defines Acquisition Category II programs as major systems with an estimated total expenditure for research, development, test and evaluation of less than $365 million but more than $140 million, or for procurement, of less than $2.19 billion but more than $660 million in FY 2000 constant dollars. DoD Instruction 5000.2 defines an Acquisition Category III program as any program that does not meet the minimum requirements of an Acquisition Category II program. The first report, Inspector General, DoD Report No. D-2004-47, "Implementation of the DoD Management Control Program for Army Acquisition Category II and III Programs," January 23, 2004, assessed the Army Management Control Program for oversight of Acquisition Category II and III programs. The third report, Inspector General, DoD Report No. D-2004-109, "Implementation of the DoD Management Control Program for Navy Acquisition Category II and III Programs," August 17, 2004, assessed the Navy Management Control Program for oversight of Acquisition Category II and III programs.

Assistant Secretary of the Air Force Emphasizes Management Control Process. The Assistant Secretary of the Air Force (Financial Management and Comptroller) stressed the importance of management controls in a February 25, 2001, memorandum on stewardship and the Air Force management control process. The Assistant Secretary emphasized that strong management controls should help to ensure that resources are used efficiently and effectively to achieve the intended program results. The Assistant Secretary stated that management controls are not an isolated tool but development strategies for reengineering Air Force programs in the years ahead. The Assistant Secretary went on to say that management controls are an integral part of the entire planning, budgeting, management, accounting and reporting cycle.

Management Control Policy. Office of Management and Budget (OMB) Circular A-123, "Management Accountability and Control," June 21, 1995,

---

[1] An acquisition category determines an acquisition program's level of review, decision authority, and applicable procedures. The acquisition categories consist of I, major Defense acquisition programs; IA, major automated information systems; II, major systems; and III, programs not meeting the criteria for acquisition categories I, IA, or II.

defines management controls as the organization, policies, and procedures that agencies use to ensure that programs achieve their intended results; resources are used consistent with an organization's mission; programs and resources are protected from fraud, waste, and mismanagement; laws and regulations are followed; and reliable data are obtained, maintained, reported, and used for program decision making. Further, the DoD and the Air Force have issued guidance to implement the requirements of OMB Circular A-123.

Federal Policy. OMB Circular A-123 requires DoD to provide an overall annual statement to the President and Congress explaining the state of DoD management controls, any control weaknesses, and noncompliant accounting systems. The Secretary of Defense is required to state whether DoD management controls provide reasonable assurance that resources are being protected from fraud, waste, and mismanagement. Circular A-123 provides guidance for establishing, evaluating, improving, and reporting on management controls in programs and administrative organizations. Further, it directs that executive organizations establish cost-effective management control systems to provide reasonable assurance that resources are protected against fraud, waste, and mismanagement and that program activities be effectively and efficiently managed to achieve the goals of the organization. Circular A-123 also states that Federal managers must carefully consider the appropriate balance of controls in their programs and operations. Appropriate management controls should be established and integrated into each system to direct and guide operations. However, Circular A-123 notes that a separate management control process need not be instituted, particularly if its sole purpose is to satisfy management control reporting requirements.

DoD Policy. To satisfy the OMB requirement, DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996, requires that the Military Departments, the Defense agencies, and the major joint commands submit annual statements on their management controls to the Secretary of Defense. There are no exemptions for acquisition programs. DoD Directive 5010.38 also provides policy, prescribes procedures, and assigns responsibilities for management control systems. DoD Directive 5000.1, "The Defense Acquisition System," May 12, 2003, requires program managers to establish program goals for cost, schedule, and performance parameters that describe the program over its life cycle. Directive 5000.1 further states that approved program baseline parameters will serve as control objectives, and that the program manager is required to identify deviations from approved program baseline parameters and exit criteria. Further, the, "DoD Interim Defense Acquisition Guidebook," October 30, 2002, states that the program manager should identify deviations from the approved parameters and exit criteria as material weaknesses.

Air Force Policy. Air Force Policy 65-201, "Management Control," May 1, 1997, implements public law and OMB and DoD guidance for a management control process, and requires Air Force commanders and managers to maintain an effective control process that identifies, reports, and corrects material weaknesses.

Scope of Air Force Programs Reviewed. To perform the audit, we coordinated with seven Air Force Program Executive Offices to identify Acquisition Category II and III programs for our review that were beyond the concept and technology development phase, but that had not received approval for full-rate production. The Acquisition Category II systems identified included the Integrated Broadcast Service, the Family of Advanced Beyond-Line-of-Sight Terminals, and the Miniature Air Launch Decoy. The Acquisition Category III systems identified included the Command and Control System-Consolidated, Air Force Terminal Instrument Procedures-Replacement, Common Low Observable Verification System, Universal Munitions Trailer, and F-15E Advance Display Core Processor.

Objectives

The overall audit objective was to evaluate the effectiveness of the management control program that the Air Force Acquisition Executive, or his designees, used for Air Force Acquisition Category II and III weapon systems. We also assessed the process for recognizing and correcting material management control weaknesses. See Appendix A for a discussion of the scope and methodology and the review of the management control program. See Appendix A for prior coverage related to the objectives. Appendix B defines management control objectives and techniques. Appendix C summarizes the status of certain program documentation prepared for the eight programs reviewed.

Air Force Management Controls for Acquisition Category II and III Programs

The Air Force did not effectively integrate the requirements of the DoD Management Control Program into its management assessment and reporting process for eight Acquisition Category II and III programs that had an estimated life-cycle cost of $1.9 billion. This condition occurred because the existing reporting mechanism in the Air Force did not require program managers to inform MDAs, at least quarterly, of their progress toward:

- satisfying cost, schedule, and performance requirements in APBs; and

- obtaining, preparing, updating, and issuing approved program documentation before and at planned milestone decision reviews.

As a result, the program managers did not have documented and updated information needed to more effectively manage their programs. The program managers further contributed to this condition by not reporting program deviations and not requesting revisions to APBs when cost, schedule, and performance breaches occurred. As a result, program managers did not provide MDAs with timely and documented information so they could assist program managers who were experiencing cost overruns, schedule delays, and performance problems. Further, MDAs made important program decisions at milestone decision points with incomplete information on the readiness of the systems for the next phase of the acquisition process.

Air Force Management Control Program

On July 23, 2003, the Office of the Secretary of the Air Force restructured the Air Force Program Executive Officers reporting process. The Air Force management structure intended the process to reduce workload and promote ownership and accountability for effective management controls by:

- developing and implementing appropriate, cost effective management controls,

- assessing the adequacy of management controls in all programs and operations,

- identifying needed improvements,

- taking corresponding corrective action, and

- reporting annually on management controls.

Air Force Management Control Program Requirements. The Assistant Secretary of the Air Force (Financial Management and Comptroller) developed the Air Force's management control program based on the General Accounting Office's five standards for internal control: control environment, risk assessment, control activities, communication and information, and monitoring. All Air Force commands are required to establish a management control program and continuously monitor and improve the effectiveness and accountability of management controls associated with their programs. Each command is to update its written plan annually, and include information that indicates the number of scheduled and accomplished management control evaluations, the inventory of assessable units, progress toward accomplishment of annual program requirements, the method of monitoring and evaluation, and the completion date of the evaluation. Emphasis is placed on maximizing the use of existing management evaluation data and minimizing the creation of processes or procedures solely to execute the management control program. It is the responsibility of the Management Control Program Coordinator to prepare the organization's management control plan and annual management control statement.

Management Controls for Acquisition Programs. Program documentation was a key component in the management control plans provided by the eight Acquisition Category II and III program offices. Milestone documentation is relied on as one of the key management controls for acquisition programs, and the milestone decision review process for evaluating controls was in place. The Air Force's process to evaluate management controls for acquisition programs did not, however, keep MDAs informed of the program managers' progress toward satisfying program requirements before milestone decision reviews. Accordingly, the Air Force's Management Control Program for acquisition programs did not ensure that program managers took the necessary actions to satisfy the program's cost, schedule, and performance requirements in the APBs before milestone reviews. The Air Force's Management Control Program also did not ensure that program managers reported deviations from APB cost, schedule, and performance parameters, or that those breaches were reported as management control weaknesses to the Assistant Secretary of the Air Force (Financial Management and Comptroller).

Air Force Reporting Process

The existing reporting mechanism in the Air Force did not require program managers for Acquisition Category II and III programs to inform the MDA, at least quarterly, of their progress towards satisfying cost, schedule, and performance requirements in approved APBs and of exit criteria requirements for the next phase of the acquisition process. The Air Force has more than 1,400 Acquisition Category II and III programs. Without a reporting mechanism in place, the Air Force MDAs cannot provide appropriate oversight for those programs. Although Acquisition Category II and III programs are valued less than Acquisition Category I programs, the sheer number of Acquisition Category II and III programs contributes to a large aggregate total. Given funding constraints, the Air Force needs to manage wisely its overall investment dollars and cannot afford to overlook the oversight of the Acquisition Category II and III programs.

The reporting process used by the Program Executive Officers did not require the Air Force program managers to report on their efforts to obtain, prepare, and update approved program documentation before planned milestone decision reviews. The program documentation is to be prepared and approved before milestone decision points, kept up-to-date between milestone decision reviews, and provide the MDA with the management control information required in DoD Directive 5000.1 to timely identify program deviations from approved APB parameters and exit criteria. As implemented, the Air Force's management assessment and reporting processes did not provide MDAs with that management control information. To be effective, the Air Force's management control program should integrate those management control requirements in its management assessment and reporting processes.

Reporting on Cost, Schedule, and Performance Requirements. Program managers for major DoD acquisition programs are required to report quarterly on their progress towards satisfying cost, schedule, and performance requirements, including approved program baseline parameters and exit criteria requirements, in the Defense Acquisition Executive Summary. On April 2, 1999, the Principal Deputy Assistant Secretary (Acquisition and Management) began requiring all Acquisition Category II and III programs encountering programmatic issues to submit monthly status reports, and required the remaining programs to submit quarterly status reports. On December 11, 2002, the Deputy Assistant Secretary (Management Policy and Program Integration) required all program offices to implement the system metric and reporting tool. A key feature of the system metric and reporting tool is to provide the MDA with information included in a monthly acquisition report. Although the memorandum requires program managers to submit monthly and quarterly status reports, it does not require program managers to inform MDAs, at least quarterly, of their progress toward

satisfying cost, schedule, and performance requirements in the acquisition program baseline and exit criteria requirements.

Reporting for Acquisition Category II Programs Reviewed. Program managers for the three Acquisition Category II programs reviewed prepared monthly acquisition reports, two of the three program managers prepared program management reviews, and one of the program managers prepared semi-annual portfolio reviews for the Program Executive Office.

Reporting for Acquisition Category III Programs Reviewed. Program managers for the five Acquisition Category III programs reviewed prepared monthly acquisition reports, four of the program managers prepared for program management reviews, and three of the program managers prepared for semi-annual portfolio reviews for the Program Executive Office.

Adequacy of Reported Information. The monthly acquisition reports, program management reviews, and Program Executive Office semi-annual reviews that the program offices prepared provided the MDA with up-to-date APB cost, schedule, and performance data, but did not, in most cases, provide the APB threshold values for the MDA to compare the data with. Without listing the APB thresholds with the existing program status, the MDA may not realize that the program is over budget or behind schedule. Additionally, the program office reports did not provide the MDA with information on whether the program would achieve the exit criteria established at the last milestone decision review. The inclusion of the APB threshold values and exit criteria for the next phase of the acquisition process in the program managers' reports would inform the MDAs of deviations from approved APB parameters and exit criteria.

Reporting on the Preparation and Completion of Required Program Documentation. DoD and Air Force procedures do not require program managers to advise MDAs on their progress towards completing and obtaining key program documentation, such as the operational requirements document (ORD), the APB, the test and evaluation master plan (TEMP), and the command, control, communications, computers, and intelligence (C4I) support plan before program initiation, which are usually required when a program enters the system development and demonstration acquisition phase. At program initiation and before subsequent program milestone reviews, however, DoD and Air Force policy requires program managers to provide those key program documents for the MDA to review.

For all eight programs reviewed, program managers held milestone reviews with MDAs for entry into the system development and demonstration phase of the acquisition process before preparing, updating, or obtaining all required documentation. For example, the Air Force Program Executive Office for Aircraft Systems approved the F-15E Advanced Display Core Processor to enter

the system development and demonstration phase of the acquisition process in June 1999, even though the program manager did not have an approved APB, C4I support plan, Programmatic Environmental, Safety, and Health Evaluation (PESHE) or TEMP. The ORD identified interoperability as a key performance parameter. Because the program manager did not have an approved C4I support plan, contract requirements defining all the key system interfaces with other systems may not have been identified and provided to the system contractor.

Program documentation that was not available to MDAs at milestone reviews varied significantly among the programs reviewed. For instance, program managers for two programs did not have an approved ORD, program managers for seven programs did not have an approved TEMP, and program managers for six programs did not have an approved C4I support plan available at their previous milestone review. Without an approved ORD that contains validated system performance requirements, the program manager and contractor cannot be sure that the system design will meet warfighter-required capabilities, and the test community does not have validated performance parameters for developmental and operational testing. An approved TEMP is an essential tool for the program manager and operational testers to identify resources needed to perform necessary tests and to test all key performance parameters. The C4I support plan is critical not only for system design, but for the test organizations to identify system integration problems that need to be corrected during testing. Although acquisition regulations encourage management to streamline and tailor acquisition documentation, the ORD, the TEMP, and the C4I support plan must be prepared and completed to provide the MDA with information needed to assess how well a program is progressing toward the next milestone review in the acquisition process.

Updating Program Documentation Between Milestone Decision Reviews. Additionally, program managers did not provide MDAs with updated program documentation between milestone decision reviews when significant changes affected their programs because they believed that updating program documentation added no value to the process when MDAs were made aware of the changes through other means. For example, the Program Manager for the Family of Advanced Beyond-Line-of-Sight Terminals experienced significant cost and schedule deviations because of funding cuts. In this case, the program manager did not submit a program deviation report to document the effects on the program, partly because no APB had been prepared to measure thresholds against. Instead, the program manager communicated information on cost and schedule breaches through quarterly program management reviews, monthly activity reports, and weekly activity reports to the MDA. It is important for program managers to document significant changes to program direction in cost, schedule, and performance requirements so that all parties affected by the changes, including the intended user of the system and the test community, can plan and

8

react accordingly. Updating formal program documentation is essential to ensure that the program manager evaluates the effect of the changes on all aspects of the program.

Appendix C describes the completeness of program documentation available at milestone decision reviews for the eight programs reviewed. Without having all required program documentation, the program manager and the MDA may not be aware of potential or actual cost, schedule, and performance problems affecting the program at the time of the milestone decision review. For example, the Family of Advanced Beyond-Line-of-Sight Terminals experienced schedule delays and cost overruns after the program entered the system development and demonstration phase because the test community encountered more testing requirements than had been planned. Because the TEMP was not completed and fully reviewed within the test community, the program manager's estimates on the time and resources needed for testing were not realistic.

If program managers of the eight programs reviewed had formally reported delays to the MDAs in the completion or approval process for key program documents, such as the ORD and the TEMP, the MDAs could have initiated actions to prepare, update, and approve the documentation before the milestone decision reviews, or to reschedule the milestone decision reviews pending the completion of required program documentation. Because program managers were not periodically reporting on their status toward completing or obtaining required program documentation, MDAs did not have information needed to take appropriate actions before the milestone decision reviews for the eight programs reviewed. MDAs also were not requesting information concerning the status of program documentation completion from program managers before program milestone reviews.

Program Deviation Reporting Requirements. In addition to not routinely reporting on program status towards satisfying program cost, schedule, and performance parameters in APBs, program managers for five of the eight acquisition programs did not have APBs to compare threshold values with at their last milestone decision review; therefore, they did not prepare program deviation reports to show threshold value breaches. Additionally, two program managers with APBs did not prepare program deviation reports for cost breaches. Reporting program deviations is an essential communication between the program managers and MDAs because it serves as an early warning of impending program complications and allows the MDA to help with a program solution. If program managers do not submit APBs, the program deviations can go unnoticed by the MDA while the program manager attempts to bring the program back into control.

Although program managers were not reporting breaches of APB parameters as management control weaknesses as required in DoD Directive 5000.1 and the DoD Interim Guidebook, they did request revisions of APB parameters when approaching a breach of a parameter. Therefore, program managers did not report breaches of an APB parameter as a management control weakness to the Assistant Secretary of the Air Force (Acquisition) as required. As a result, the Assistant Secretary of the Air Force (Acquisition) did not consider those APB parameter breaches for inclusion as a material management control weakness in the FY 2003 statement of assurance.

Effect of Management Control Techniques on Program Documentation

Program documentation is the primary means for providing the MDA, as well as other key managers, with information needed for decision making. Without accurate and updated program documents, such as the APB, the ORD, the TEMP, and the C4I support plan, along with the program manager's periodic reporting of progress made toward satisfying those requirements, the program manager cannot provide assurance to the MDA that cost, schedule, and performance thresholds in the APB are being achieved and that the program is affordable. Without this information, program managers and MDAs did not have documented information needed for program management and oversight, and MDAs did not have information needed to assist program managers who were experiencing program cost overruns, schedule delays, and performance problems. Further, MDAs did not have the information they needed at milestone decision points to make informed program decisions on the readiness of the systems to continue into the next phase of the acquisition process.

Conclusion

The management control program for Air Force Acquisition Category II and III programs varied depending upon the commitment of program management. As a result of the Air Force program offices maximizing the use of existing management evaluation data to accomplish their management control assessments, the assessments did not, in most cases, provide timely management control information to MDAs on the program managers' progress toward satisfying cost, schedule, and performance parameters in APBs, which are the control objectives for acquisition programs established in DoD Directive 5000.1.

Techniques to achieve control objectives also exist in the preparation and presentation of key documents such as the APB agreement, earned value

management data, and operational test reports. Accordingly, modifying the existing Air Force reporting requirements for Acquisition Category II and III programs to include APB threshold values, exit criteria, and program performance for those requirements would provide Air Force MDAs with management control information to implement the requirements in DoD Directive 5000.1 and would satisfy the management control reporting requirements in DoD Directive 5010.38.

Because of the conditions identified during the audit, the Air Force Acquisition Executive should implement the following recommendations to improve the Air Force existing management control reporting requirements for Acquisition Category II and III programs.

Recommendations

1. We recommend that the Air Force Acquisition Executive modify its existing reporting requirements for program managers of Acquisition Category II and III programs to report to the milestone decision authority, at least quarterly, on their progress towards satisfying cost, schedule, and performance parameters in approved acquisition program baselines, satisfying exit criteria for the next phase in the acquisition process, and obtaining and preparing key program documentation, such as the operational requirements document; the test and evaluation master plan; and the command, control, computers, communications, and intelligence support plan between and for milestone decision reviews.

2. We recommend that Air Force Program Executive Officers:

     a. Use information in the program managers' progress reports discussed in Recommendation 1. to require that program managers prepare program deviation reports when breaches of acquisition program baseline parameters occur.

     b. Report breaches of acquisition program baseline parameters and unattained program exit criteria to the Assistant Secretary of the Air Force (Acquisition) for consideration as material management control weaknesses for inclusion in the Air Force annual statements of assurance as required in DoD Directive 5000.1, "The Defense Acquisition System," May 12, 2003, and DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996.

Appendix A. Scope and Methodology

To perform the audit, we coordinated with the Air Force Program Executive Offices to select Acquisition Category II and III programs for our review that were beyond the concept and technology development phase, but had not entered the production and deployment phase of the acquisition process. Accordingly, we reviewed the following eight Air Force acquisition programs that the Air Force Program Executive Offices identified:

PEO Aircraft Systems

- Common Low Observable Verification Systems[1]

- F-15E Advanced Display Core Processor Program[1]

PEO Command and Control

- Air Force Terminal Instrument Procedures-Replacement[1]

- Integrated Broadcast Service[2]

PEO Space

- Command and Control System-Consolidated[1]

- Family of Advanced Beyond-Line-of-Sight Terminals [2]

PEO Weapons

- Miniature Air Launched Decoy[2]

- Universal Munitions Trailer[1]

In reviewing the management control process used by the Air Force for Acquisition Category II and III programs, we examined FY 2002 and FY 2003 management control documentation. That documentation included management control-related tasking from the Assistant Secretary of the Air Force (Financial Management and Comptroller), the Assistant Secretary of the Air Force (Acquisition), the Air Force Program Executive Offices; Air Force annual statements of assurance; and supporting documentation. We reviewed those documents to identify whether a standardized procedure was in place to complete

---

[1] Acquisition Category III.

[2] Acquisition Category II.

and submit the required documentation and to determine whether the Air Force had identified any material management control weaknesses for Air Force Acquisition Category II and III programs.

To evaluate the reporting process used by the Air Force to support its management control of acquisition programs, we reviewed documentation dated from June 1995 through June 2004. The documentation included acquisition decision memorandum, APBs, acquisition strategy reports, affordability assessments, analyses of alternatives, C4I support plans, PESHEs, ORDs, and TEMPs for the eight Air Force programs selected for review. We reviewed those documents to ensure that the required program documentation for each program was complete, accurate, and up-to-date.

We performed this audit from November 2003 through June 2004 in accordance with generally accepted government auditing standards.

Use of Computer-Processed Data. We did not use computer-processed data to perform this audit.

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in DoD. This report provides coverage of the DoD Weapons Systems Acquisition high-risk area.

Management Control Program Review

DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996, and DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996, require DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of the Review of the Management Control Program. In accordance with DoD policy, acquisition managers are to use program cost, schedule, and performance parameters as control objectives in APBs to implement the requirements of DoD Directive 5010.38. Accordingly, we limited our review to management controls directly related to program cost, schedule, and performance in APBs. We also reviewed the adequacy of management's self-evaluation of those controls.

Adequacy of Management Controls. We identified material management control weaknesses for the Air Force, as defined in DoD Instruction 5010.40. The Air Force Acquisition Executive and the Program Executive Officers did not ensure that controls for obtaining, preparing, updating, and approving program

13

documentation and preparing program deviation reports were sufficient that program managers timely provided MDAs with acquisition program documentation needed to effectively oversee a program's cost, schedule, and performance data at and between milestone decision reviews. Recommendations 1. and 2., if implemented, will improve the quality and timeliness of program information provided to Air Force MDAs so that they can make fully informed investment decisions. A copy of the report will be provided to the senior official responsible for management controls in the Air Force.

Adequacy of Management's Self-Evaluation. None of the Program Executive Offices or program offices reviewed identified management control weaknesses related to preparing and updating required acquisition program documentation used for program oversight and decision making. The Program Executive Officers and program managers did not report those weaknesses because they did not recognize the lack of up-to-date documentation as a management control weakness.

Prior Coverage

During the last 5 years, the Air Force Audit Agency issued one report that addressed management control weaknesses for an acquisition program.

Air Force Audit Agency

Report No. F2003-0002-FCQ000, "Integrated Broadcast Service Electronic Systems Center, Hanscom AFB MA," May 12, 2003

Appendix B. Management Control Objectives and Techniques

Control Objectives. Control objectives are the specific goals, conditions, or levels of control that a manager establishes for an assessable unit to provide reasonable assurance that the resources assigned to that organization are adequately safeguarded against waste, fraud, and mismanagement.

Control objectives must be identified for each organization and should be logical, applicable, reasonably complete, and tailored to an agency's operations, which means that the control objectives should be the positive effects that management tries to attain or the negative effects it seeks to avoid through adherence to established management controls.

For Air Force acquisition programs, basic control objectives involve the program office's ability to adhere to a weapon system's cost, schedule, and performance baseline parameters that are embodied in APBs. The program manager updates and the MDA approves the APB at milestone reviews. As weapon systems progress through the acquisition process, baseline parameters are refined and the level of detail evolves at succeeding milestone reviews. The program manager identifies minimum acceptable requirements for each baseline parameter, known as thresholds. Values for APB parameters show the system's cost and performance characteristics as they are expected to be produced and fielded, as well as critical acquisition schedule events. If those minimum acceptable levels or thresholds are not met, the MDA may require a reevaluation of alternative concepts or design approaches.

Program exit criteria are also control objectives for Air Force acquisition programs. Exit criteria are the specific minimum requirements that a system must satisfactorily demonstrate before the MDA will consider approving the system for transitioning to the next acquisition phase.

Control Techniques. Control techniques are mechanisms by which control objectives are achieved. A control technique is any form of organization, procedure, or document flow that is relied on to accomplish a control objective and help safeguard or protect an organization from fraud, waste, and mismanagement. Control techniques include, but are not limited to, specific policies, procedures, plans of organization (including separation of duties), and physical arrangements (such as locks and fire alarms). Management control techniques are to continually provide a high degree of assurance that the management control objectives are being achieved.

For Air Force acquisition programs, the milestone review documentation specified in DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003, provides control techniques to achieve the control objectives. The management control techniques in the Instruction include the documents in the following table.

Management Control Techniques

Control Technique	Objective(s) Controlled	Prepared By	Submitted To
APB Agreements	Cost, schedule, and performance baselines	Program Manager	MDA
Command, Control, Computers, Communications, and Intelligence (C4I) Support Plan	C4I support requirements to satisfy the development, testing, and operational employment of the system	DoD Component	MDA
Earned Value Management Data	Reports the progress of the program in meeting cost parameters	Contractor	Program Manager
Operational Requirements Document (ORD)	Translates mission needs into detailed performance capabilities and characteristics	DoD Component	Service
Operational Test Reports	Reports on the progress of the program in meeting performance parameters	Independent Test Agency	Program Manager
Test and Evaluation Master Plan (TEMP)	Major elements and objectives of the test and evaluation program	Program Manager	Director, Operational Test and Evaluation;* MDA; and Air Force Operational Test and Evaluation Center

*The Director, Operational Test, and Evaluation approves the TEMP for all test and evaluation oversight programs in the Office of the Secretary of Defense.

DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996, requires system documentation to be maintained for management control programs. System documentation includes the policies and procedures, organizational charts, manuals, flow charts, and related written and graphic materials necessary to describe organizational structure, operating procedures, and administrative practices to communicate responsibility and authority for accomplishing programs and activities. This type of management control documentation is specified in DoD Instruction 5010.40.

Appendix C. Program Documentation Status

DoD Instruction 5000.2 identifies mandatory program documents that program
managers must provide at program milestone reviews. The DoD Interim Defense
Acquisition Guidebook explains the importance of the acquisition program
documents. The following table of five mandatory acquisition program
documents shows whether the program managers for the eight programs reviewed
provided the MDA with the completed and approved documents at the acquisition
program's last milestone decision review.

Mandatory Program Documentation Provided

Program	APB	C4I Support Plan	ORD	PESHE	TEMP
AFTERPS-R[1]	No	No	No	No	No
CCS-C[2]	No	No	Yes	No	No
CLOVerS[3]	Yes	N/A	Yes	No	No
FAB-T[4]	No	No	Yes	No	No
F-15E[5]	No	No	Yes	No	No
IBS[6]	Yes	No	Yes	Yes	Yes
MALD[7]	Yes	No	Yes	No	No
UMT[8]	No	N/A	No	N/A	No

---

[1] Air Force Terminal Instrument Procedures-Replacement.

[2] Command and Control System-Consolidated.

[3] Common Low Observable Verification Systems.

[4] Family of Advanced Beyond-Line-of-Sight Terminals.

[5] F-15E Advanced Display Core Processor Program.

[6] Integrated Broadcast Service.

[7] Miniature Air Launched Decoy.

[8] Universal Munitions Trailer.

Importance of Milestone Documents

Acquisition Program Baseline. Every acquisition program must have an APB at program initiation. The program manager prepares the APB in coordination with the user to document the most important cost, schedule, and performance parameters (both threshold and objective) for the program. The program manager bases the APB on user performance requirements, schedule requirements, and an estimate of total program cost. The program manager, in coordination with the user, should obtain approval for a revised APB if the program is restructured or if there is an unrecoverable program deviation.

C4I Support Plan. DoD Components must develop C4I support plans for all programs early in the acquisition process when the Components connect in any way to the communication and information infrastructure. Acquisition decision makers are required to review the C4I support plan at each program milestone decision; at decision reviews, as appropriate; and whenever support requirements change. A C4I support plan assists in identifying system integration issues that need to be addressed during testing.

Operational Requirements Document. The ORD is a formatted statement containing performance parameters for the proposed concept or system that is prepared by the user or the user's representative. An ORD provides the developmental and operational testers with the ability to determine whether the system meets minimum required system capabilities.

Programmatic Environmental Safety and Health Evaluation. The program manager is to initiate the evaluation at the earliest possible time in support of a program initiation decision and maintain an updated evaluation throughout the life cycle of the program. When program managers perform the analyses for the PESHE, they gain information on the potential environmental, safety, and health effects of developing, fielding, storing, demilitarizing, and disposing of their weapon systems. Information should be obtained before the program enters the system development and demonstration phase to prevent program delays and added program costs stemming from the violation of environmental, safety, or health laws.

Single Acquisition Management Plan. The single acquisition management plan is a comprehensive, integrated plan written at the strategic level, which discusses all relevant aspects of a program.

Test and Evaluation Master Plan. The TEMP documents the overall structure and objectives of the test and evaluation program. It provides a framework within which to generate detailed test and evaluation plans and to document schedule and resource implications associated with the test and evaluation program. The TEMP identifies necessary developmental test and evaluation, operational test and evaluation, and live-fire test and evaluation activities. An approved TEMP is

an essential tool for the program manager and operational testers to identify resources needed to perform necessary tests and to test all key performance parameters and resolve problem areas.

Program Documentation Status

Air Force Terminal Instrument Procedures-Replacement. The System Program Director, Global Air Traffic Operations/Mobility Command and Control approved the Air Force Terminal Instrument Procedures-Replacement Program to enter the production and deployment phase for Release A and the system and demonstration phase for Release B on April 2, 2003. At the milestone decision review, the program office did not have an approved APB, C4I support plan, ORD, PESHE, or TEMP for MDA review. The system program director approved the APB on May 12, 2004. The PESHE was approved on May 26, 2004. As of June 2004, the program office had not completed or obtained approval of the C4I support plan, ORD, and TEMP.

The program office developed a requirements correlation matrix to replace the ORD but the requirements correlation matrix is not a stand-alone document. The Joint Integration and Test Command concluded that some Air Force Terminal Instrument Procedures-Replacement system interfaces need to be tested and certified so that the program can meet its DoD regulatory obligations. However, the Joint Integration and Test Command will not certify the Air Force Terminal Instrument Procedures-Replacement system without a Joint Staff-certified ORD. Because the program does not have a certified ORD, the program office unilaterally determined that Joint Integration and Test Command certification was not required. Accordingly, the system program director requested that the Air Force Communications Agency waive the C4I support plan requirement because the requirements correlation matrix does not include an interoperability key performance parameter. Because the program office did not believe that a TEMP was required for an Acquisition Category III program, it developed a test and evaluation concept plan dated March 19, 2003.

Command and Control System-Consolidated. The Command and Control System-Consolidated Program Office did not have an approved acquisition decision memorandum to document the approval to enter the system development and demonstration phase of the acquisition process. The Command and Control System-Consolidated entered the system development and demonstration phase in February 2001. Further, the program office did not have an approved APB, C4I support plan, PESHE, or TEMP. As of June 2004, the program office had not completed or obtained approval of the APB, C4I support plan, PESHE, and TEMP. The ORD identified system interoperability requirements in the C4I support plan as a key performance parameter. The program office prepared the C4I support plan and the PESHE and should be

approved by fall 2004. The TEMP was projected to be completed by June 2004, and the APB is in coordination.

Common Low Observable Verification System. The Commander, Aeronautical Systems Center approved the Common Low Observable Verification System to enter the engineering, manufacturing, and development phase of the acquisition process on May 6, 1999. At the milestone decision review, the program office did not have an approved PESHE or TEMP for MDA review. The PESHE was not approved until January 2003, 3.5 years after the milestone decision review. Instead of preparing a TEMP, the program office developed a broad, top-level test strategy in the single acquisition management plan.

F-15E Advanced Display Core Processor. The F-15E Advanced Display Core Processor Program Office did not have an approved acquisition decision memorandum to document the approval to enter the system development and demonstration phase of the acquisition process. The F-15E Advanced Display Core Processor entered the system development and demonstration phase on June 8, 1999. At that time, the program office did not have an approved APB, C4I support plan, PESHE, or TEMP. As of June 2004, the documents had not been completed or approval obtained because, according to the program office, the TEMP and the C4I support plan[1] were not required for an Acquisition Category III program. Additionally, the program office stated that it did not have to develop a C4I support plan because the Advanced Display Core Processor did not have any external interfaces. Further, the program office considered the single acquisition management plan as a substitute for the APB and had no plans to develop and obtain approval of an APB.

The program office's statements that a C4I support plan was not required because the F-15E Advanced Display Core Processor was an Acquisition Category III program and it did not have any external interfaces is contrary to policy in both CJCS Instruction 6212.01B, "Interoperability and Supportability of National Security Systems, and Information Technology Systems," May 8, 2000, and its revision, CJCS Instruction 6212.01C, "Interoperability and Supportability of Information Technology and National Security Systems," November 8, 2003. Specifically, CJCS Instruction 6212.01B states that the C4I support plan is required for all systems, regardless of acquisition category, to identify dependencies and interface requirements between systems. Similarly, CJCS Instruction 6212.01C requires the Information Support Plan,[1] regardless of acquisition category, for all developmental and fielded systems to permit evaluation of system interoperability and supportability requirements. Additionally, although the Advanced Display Core Processor does not directly interface with external systems, it does enhance the overall interoperability of the F-15E aircraft. As stated in the ORD, the Advanced Display Core Processor will

---

[1] C4I support plan now designated as the Information Support Plan in CJCS Instruction 6212.01C.

allow the F-15E to receive and display various types of information, including correlated airborne and ground tracks, and with other fighter aircraft and sensor platforms (such as the Airborne Warning and Control System).

CJCS Instruction 6212.01B specifically states that hardware and software modifications that affect the interoperability of fielded systems will require Joint Interoperability Test Command recertification before the system modifications are fielded for initial operational capability. The Joint Interoperability Test Command uses the C4I support plans to support the recertification of modified systems. Similarly, CJCS Instruction 6212.01C requires the Information Support Plan to support interoperability certification for modified systems. As of June 2004, the Joint Interoperability Test Command had not certified that the F-15 platform met DoD interoperability requirements because the F-15 program office had not prepared a C4I support plan for the overall F-15 system, which would include the Advanced Display Core Processor and the F-15 platform.

Instead of preparing a TEMP, the program office addressed the test strategy in the single acquisition management plan. The F-15 System Program Office prepared the PESHE in January 2003 but, as of June 2004, it still had not been approved.

Family of Advanced Beyond-Line-Of-Sight Terminals. The Family of Advanced Beyond-Line-Of-Sight Terminals Program Office did not have an approved acquisition decision memorandum to document the approval to enter the system development and demonstration phase of the acquisition process. The Family of Advanced Beyond-Line-Of-Sight Terminals entered the system development and demonstration phase on September 20, 2002. At that time, the program office did not have an approved APB, C4I support plan, PESHE, or TEMP. As of June 2004, the documents had not been completed or approval obtained. A new program manager took over in November 2003, at which time a review of all major program documents was conducted and the decision was made to update the documents when the program becomes an Acquisition Category I program sometime during the summer of 2004. According to the deputy program manager, the status of documents was briefed to the MDA and the Program Executive Officer at the November 2003 program management review.

Integrated Broadcast Service. The Principal Deputy Assistant Secretary of the Air Force (Acquisition and Management) approved the Integrated Broadcast Service to enter the engineering, manufacturing, and development phase of the acquisition process on May 2, 2001. At the milestone decision review, the program office did not have an approved C4I support plan for MDA review. As of June 2004, the program office had prepared a C4I support plan but was waiting for review and further guidance from the Air Force Communications Agency.

Miniature Air Launched Decoy. The Commander, Air Armament Center approved the Miniature Air Launched Decoy Program to enter the system development and demonstration phase on January 6, 2003. At the milestone

decision review, the program office did not have an approved TEMP, C4I support plan, and PESHE for MDA review. The TEMP was not approved until March 3, 2003, 2 months after the milestone decision review. The program office provided a C4I support plan dated April 2003 that had not been approved, but planned to have a completed and approved PESHE by May 2006.

Universal Munitions Trailer. The Universal Munitions Trailer Program Office did not have an approved acquisition decision memorandum to document the approval to enter the system development and demonstration phase of the acquisition process. The Universal Munitions Trailer program entered the system development and demonstration phase on September 10, 2002. At that time, the program office did not have an approved APB, ORD, and TEMP. As of June 2004, the program office had not completed and obtained approval of a TEMP or obtained an approved ORD. The program office developed a requirements correlation matrix to replace the ORD, but the requirements correlation matrix is not a stand-alone document. Instead of preparing a TEMP, the program office developed a draft combined developmental and operational test and evaluation plan because the program office believed that a TEMP was not required for an Acquisition Category III program.

Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics
Under Secretary of Defense (Comptroller)/Chief Financial Officer
    Director, Program Analysis and Evaluation
    Deputy Chief Financial Officer
    Deputy Comptroller (Program/Budget)
Director, Operational Test and Evaluation

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Naval Inspector General
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Assistant Secretary of the Air Force (Acquisition)
    Program Executive Officer, Aircraft Systems
        Program Manager, Common Low Observable Verification System
        Program Manager, F-15E Advanced Display Core Processor
    Program Executive Officer, Command and Control & Combat Support
        Program Manager, Air Force Terminal Instrument Procedures-Replacement
        Program Manager, Integrated Broadcast Service
    Program Executive Officer, Space
        Program Manager, Command and Control System-Consolidated
        Program Manager, Family of Advanced Beyond-Line-of-Sight Terminals
    Program Executive Officer, Weapons
        Program Manager, Miniature Air Launched Decoy
        Program Manager, Universal Munitions Trailer
Auditor General, Department of the Air Force

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Reform
House Subcommittee on Government Efficiency and Financial Management, Committee on Government Reform
House Subcommittee on National Security, Emerging Threats, and International Relations, Committee on Government Reform
House Subcommittee on Technology, Information Policy, Intergovernmental Relations, and the Census, Committee on Government Reform

Team Members

The Office of the Deputy Inspector General for Auditing of the Department of Defense, Acquisition Management prepared this report. Personnel of the Office of the Inspector General of the Department of Defense who contributed to the report are listed below.

John E. Meling
Celia J. Harrigan
Kevin B. Palmer
Lidet K.Negash
Deanna Wyatt
Jacqueline N. Pugh